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DOLEZAL, O.

DOLEZAL, O. Our experience with a prototype of the 2-SKR-B combine for harvesting sugar beets. p. 9.

Vol. 7, no. 1, Jan. 1957
MACHANISACE ZEMEDELSTVI
AGRICULTURE
Czechoslovakia

So: East European Accession, Vol. 6, No. 5, May 1957

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DOLEZAL, O.

How shall we organize the drying of grain and the collection of straw in 1957.
p. 278.
(Mechanisace Zemedelstvi, Vol. 7, no. 12, Juen 1957. Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 10, October 1957. Uncl.

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DOLEZAL, O.

Experiences acquired up to now in harvesting with combines in Slovakia. p. 333. (MECHANISACE ZEMEDELSTVI, Vol. 7, No. 15, Aug 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.

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DOLEZAL, O.

Beginning autumn work without time losses. p. 368. (MECHANISACE ZEMEDELSTVI, Vol. 7, No. 16, Aug 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec1957. Uncl.

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DOLEZAL, O.

Evaluating the fulfillment of the tasks of machine-tractor stations for 1957.

p. 554 (MECHANISACE ZEMEDELSTVI) Vol. 7, no. 24, Dec. 1957, Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3, March 1958

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DOLEZAL, O.

"Tenth anniversary of our machine-tractor stations."

P. 3. (Ministerstvo zemedelstvi --Praha, Czechoslovakia.) Vol. 8, no. 1, Jan. 1958.

SO: Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 5, May 1958

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DOLEZAL, O.

Collective farms and machine-tractor stations.

P. 9. (ROLNICKE HLASY) (Praha, Czechoslavakia) Vol. 11, No. 12, Jan. 1958

SO Monthly Index of East European Accession (EEAI) LC,Vol. 7, No. 5, May 1958

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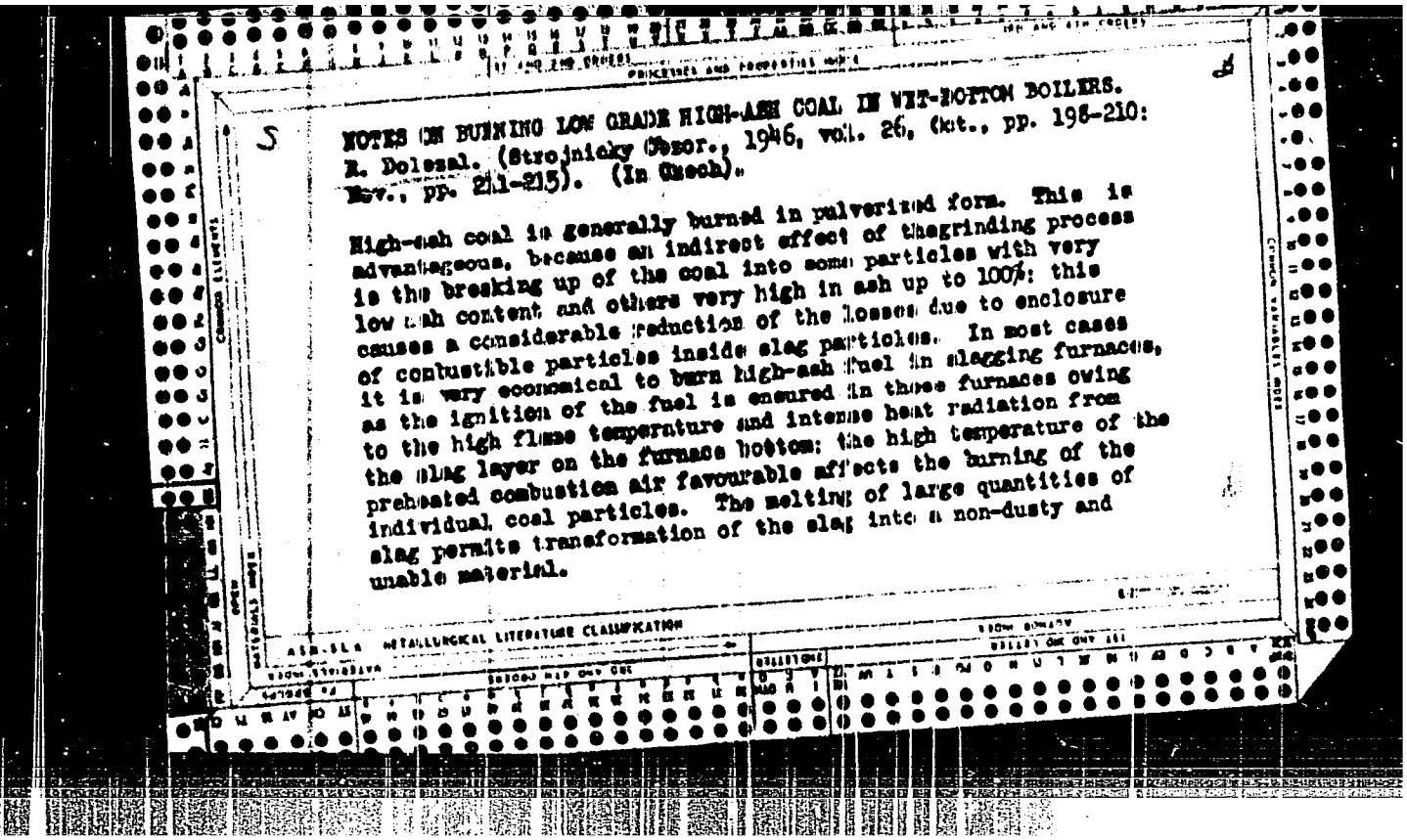

NOTES ON BURNING LOW GRADE HIGH-ASH COAL IN WET-BOTTOM BOILERS.
R. Dolezal. (Strojnicky Obzor., 1946, vol. 26, (6), pp. 198-210: Rev., pp. 211-215). (In Czech).

High-ash coal is generally burned in pulverized form. This is advantageous, because an indirect effect of thegrinding process is the breaking up of the coal into some particles with very low ash content and others very high in ash up to 100%: this causes a considerable reduction of the losses due to enclosure of combustible particles inside slag particles. In most cases it is very economical to burn high-ash fuel in slagging furnaces, as the ignition of the fuel is ensured in these furnaces owing to the high flame temperature and intense heat radiation from the slag layer on the furnace bottom: the high temperature of the preheated combustion air favourable affects the burning of the individual coal particles. The melting of large quantities of slag permits transformation of the slag into a non-dusty and unable material.

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A considerable amount of heat is consumed for heating and melting the slag particles. Granulation in water does not permit economical utilization of the heat in the slag, but this heat could be utilized if a slag- granulation process could be developed which would heat the air for combustion. Preheating combustion air is very important because it permits burning of coal with low calorific value and high ash, and with a slagging furnace, coal having ash of a high melting point can be burned. The resulting high flame temperature also improves the combustion of the coal particles, and because of the increased temperature, the thickness of the solid slag layer decreased causing an increased heat transfer through the furnace wall. It is important to place the air heater immediately behind the slagging furnace walls where the temperature is highest in order to obtain maximum heat radiation because at such high temperatures heat transfer by convection is relatively unimportant. The function of the refractory lining of the walls is not a very important factor in furnaces designed to burn high-ash coal, because the heat transfer coefficient of the furnace wall is mainly dependent on the rate of slag deposition when the mean flame temperature does not exceed 1500°C. The thickness of the slag layer on the furnace bottom is very much larger than the layer adhering to the walls, thus providing good insulation. For a slag layer 150 mm. thick the temperature of the boundary layer of the refractory lining is only about 50°C. higher than that of the water in the cooling tubes, and occurrence of steam bubbles in case of stopped water circulation will not cause tube failures by local overheating. K. G.

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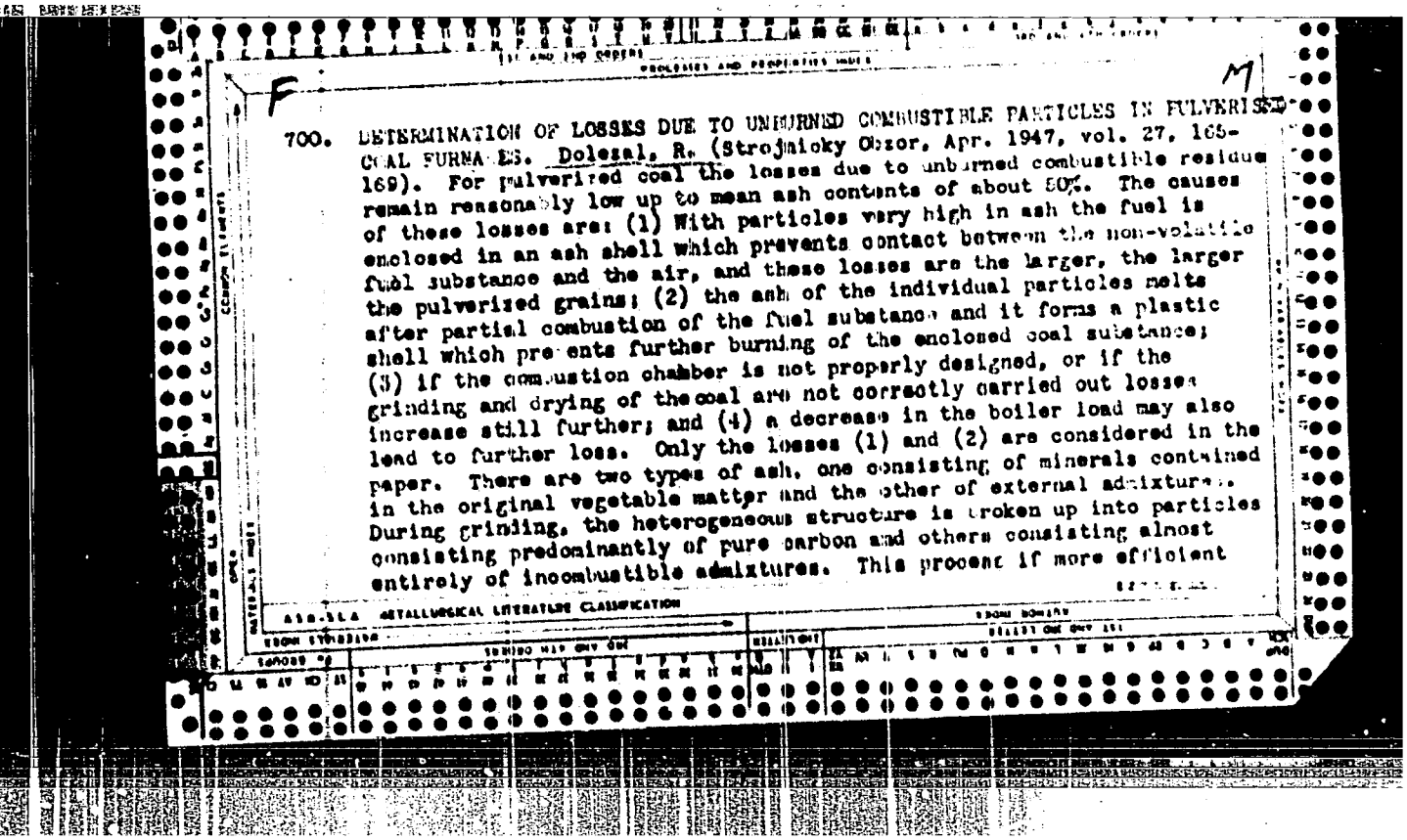

700. DETERMINATION OF LOSSES DUE TO UNBURNED COMBUSTIBLE PARTICLES IN PULVERISED COAL FURNACES. Dolesal, R. (Strojnicky Obzor, Apr. 1947, vol. 27, 165-169). For pulverized coal the losses due to unburned combustible residue remain reasonably low up to mean ash contents of about 50%. The causes of these losses are: (1) With particles very high in ash the fuel is enclosed in an ash shell which prevents contact between the non-volatile fuel substance and the air, and these losses are the larger, the larger the pulverized grains; (2) the ash of the individual particles melts after partial combustion of the fuel substance and it forms a plastic shell which prevents further burning of the enclosed coal substance; (3) if the combustion chamber is not properly designed, or if the grinding and drying of the coal are not correctly carried out losses increase still further; and (4) a decrease in the boiler load may also lead to further loss. Only the losses (1) and (2) are considered in the paper. There are two types of ash, one consisting of minerals contained in the original vegetable matter and the other of external admixtures. During grinding, the heterogeneous structure is broken up into particles consisting predominantly of pure carbon and others consisting almost entirely of incombustible admixtures. This process if more efficient

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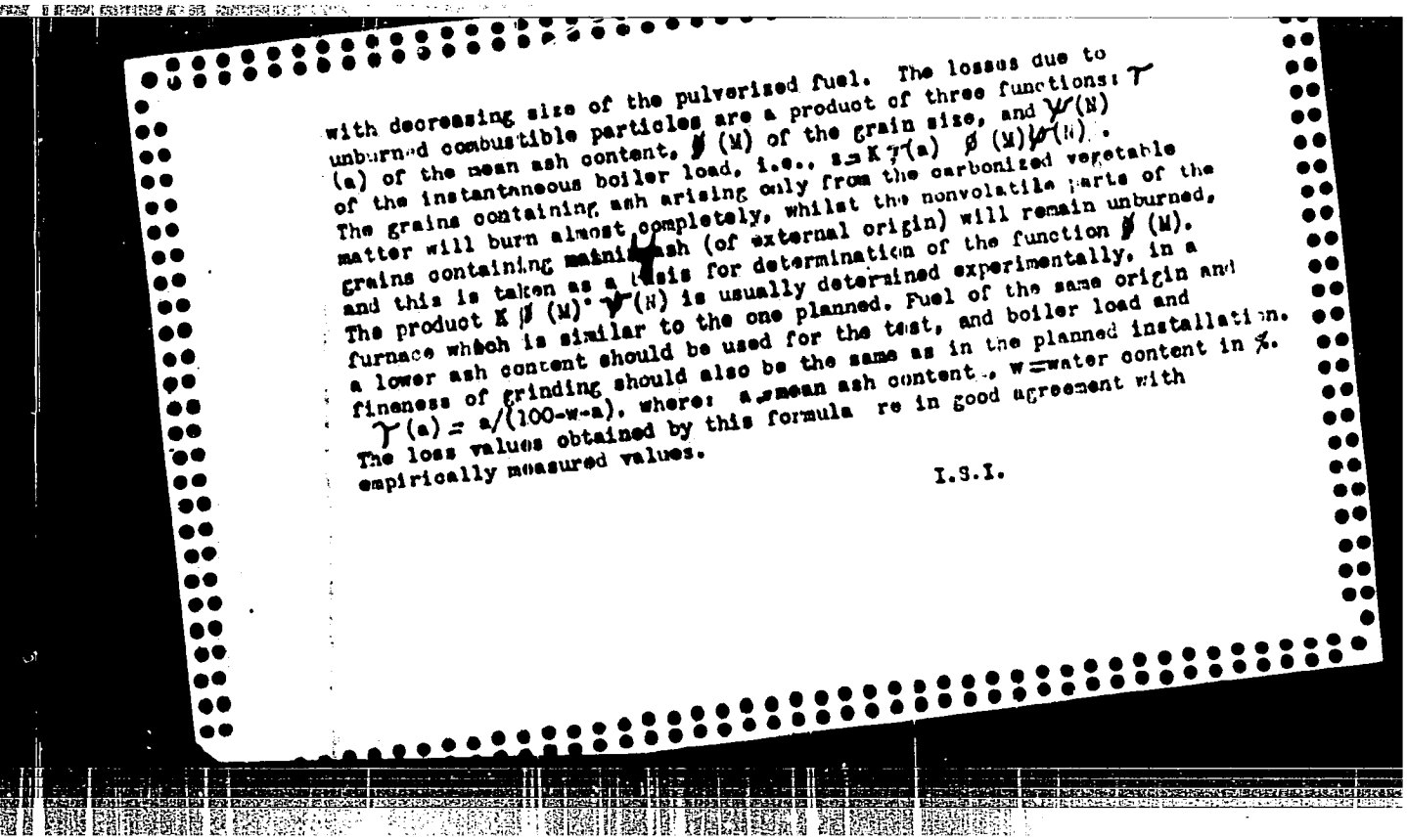

with decreasing size of the pulverized fuel. The losses due to unburned combustible particles are a product of three functions: τ (a) of the mean ash content, ϕ (M) of the grain size, and ψ(N) of the instantaneous boiler load, i.e., $s = K\,\tau(a)\,\phi(M)\,\psi(N)$. The grains containing ash arising only from the carbonized vegetable matter will burn almost completely, whilst the nonvolatile parts of the grains containing mainly ash (of external origin) will remain unburned, and this is taken as a basis for determination of the function ϕ (M). The product $K\,\phi(M)\cdot\psi(N)$ is usually determined experimentally, in a furnace which is similar to the one planned. Fuel of the same origin and a lower ash content should be used for the test, and boiler load and fineness of grinding should also be the same as in the planned installation. $\tau(a) = a/(100-w-a)$, where: a = mean ash content, w = water content in %. The loss values obtained by this formula are in good agreement with empirically measured values.

I.S.I.

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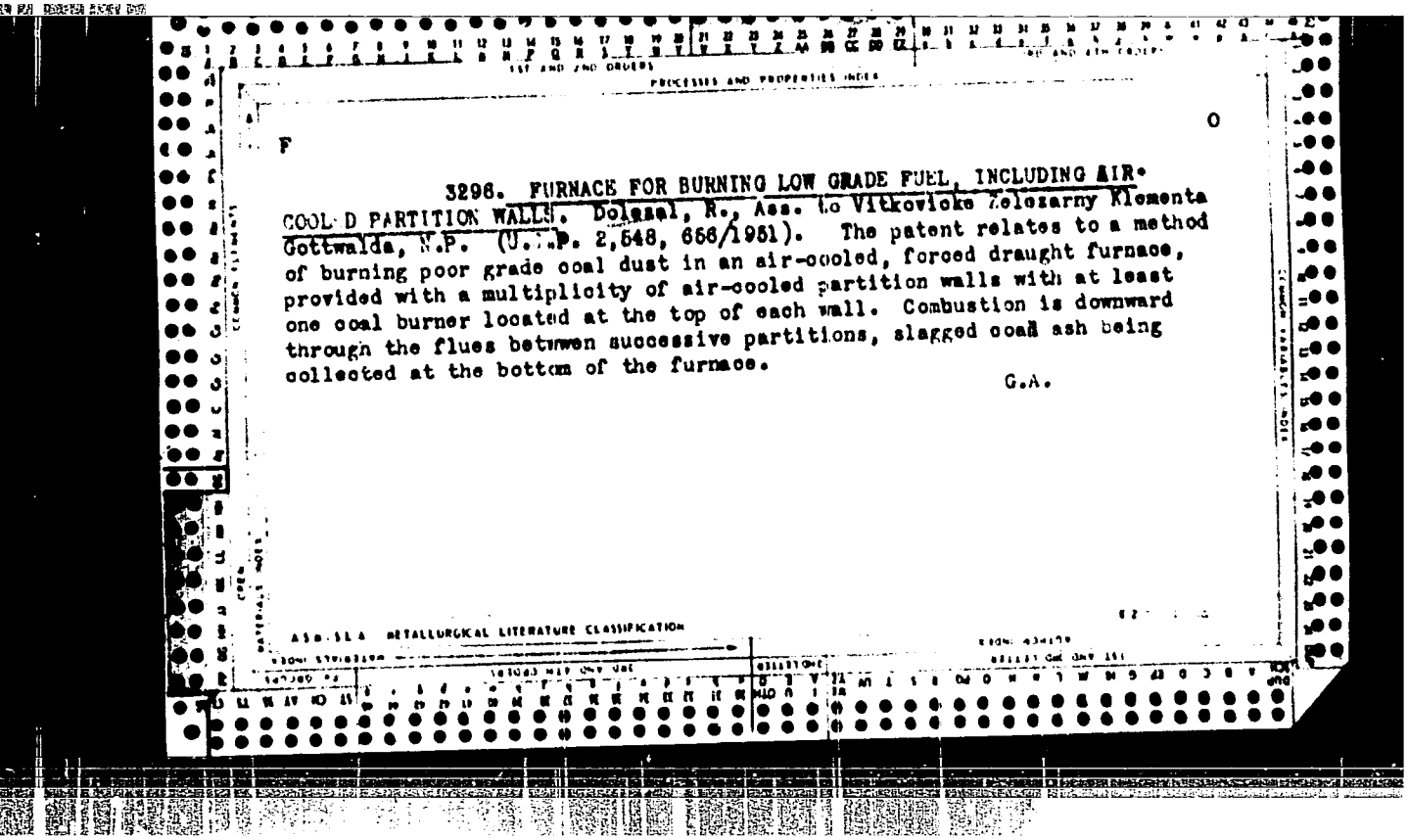

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3298. FURNACE FOR BURNING LOW GRADE FUEL, INCLUDING AIR-COOLED PARTITION WALLS. Dolezal, R., Ass. to Vitkovicke Zelezarny Klementa Gottwalda, N.P. (U.S.P. 2,648, 656/1951). The patent relates to a method of burning poor grade coal dust in an air-cooled, forced draught furnace, provided with a multiplicity of air-cooled partition walls with at least one coal burner located at the top of each wall. Combustion is downward through the flues between successive partitions, slagged coal ash being collected at the bottom of the furnace.

G.A.

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DOBESKA, K.

"Accumulation of heat in slag on the walls and bottoms of crucibles." p. 291. (Energetika. Vol. 3, no. 9, Sept. 1953. Praha.)

SO: Monthly List of East European Accessions, Vol. 3, no. 6, Library of Congress, June 1954. Uncl.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000410810003-4"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000410810003-4

DOLEZAL, R.

"Remarks on Construction and Regulation of Machinery Producing Steam at High Pressure and Temperatures with Reference to Saving Molybdenum and Alloying Elements." p. 158, Praha, Vol. 3, no. 5, May 1953.

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000410810003-4

DOLEZAL, R.

"Unalloyed Steel Pipelines for Steam with Temperature Above 500 C." p. 812 (STROJIRENSTVI, Vol. 3, No. 11, Nov. 1953) Praha, Czechoslovakia

SO: Monthly List of East European Accessions, Library of Congress, Vol. 3, No. 4, April 1954. Unclassified.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000410810003-4"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000410810003-4

DOLEZAL, R.

"Effect of the composition of iron on the properties of ash or slag in fire boxes of steam boilers operating on powder. (Supplement) " Energetika, Praha, Vol. 4, No. 7, July 1954, p. 1.

SO: Eastern European Accessions List, Vol. 3, No. 11, Nov. 1954, L.C.

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DOLEZAL, R.

"Tubular Walls of Smelting Furnaces." p. 243. Vol. 4, no. 4, Apr. 1954, Praha

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

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DOLEZAL, R.

"Effect of insufficient sealing of furnaces on the operation of steam boilers." Strojirenstvi, Praha, Vol. 4, No. 7, July 1954, p.508.

SO: Eastern European Accessions List, Vol. 3, No. 11, Nov. 1954, L.C.

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DOLEZAL, R.

"Possibilities of Using Smelting Furnaces With Air-Cooled Walls," P. 563, (STROJIRENSTVI, Vol. 4, No. 8, Aug. 1954, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000410810003-4"

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DOLEZAL, R.

Constructional problems in the removal of salt from high-pressure boilers. p. 760.
STROJNICKY CASOPIS. Vol. 1, no. 10, Oct. 1950.

SO: Monthly List of East European Accessions (EEAI) LC, Vol. 5, No. 5, June 1956 Uncl.

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DOLEZAL, R.

"Effect of iron content on properties of ash or slag in steam boiler furnaces operating on powdered fuel." Technicka Praca, Bratislava, Vol. 6, No. 1, Jan 1954, p. 13.

SO: Eastern European Accessions List, Vol. 3, No. 11, Nov. 1954, L.C.

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DOLEZAL, R.

"New Method for Regulating Superheated Steam at a Temperature Higher than 500° C in the Klement Gottwald Ironworks in Vitkovice, which uses a large amount of Fuel", P. 392. (TECHNICKA PRACA, Vol. 6, No. 7, July 1954, Bratislava, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 4, No. 1, Jan. 1955, Uncl.

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DOLEZAL, R.

Better utilization of heat in boilers using waste heat. p. 536.
TECHNICKA PRACA, Bratislava, Vol. 6, no. 9, Sept. 1954.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6, June 1956, Uncl.

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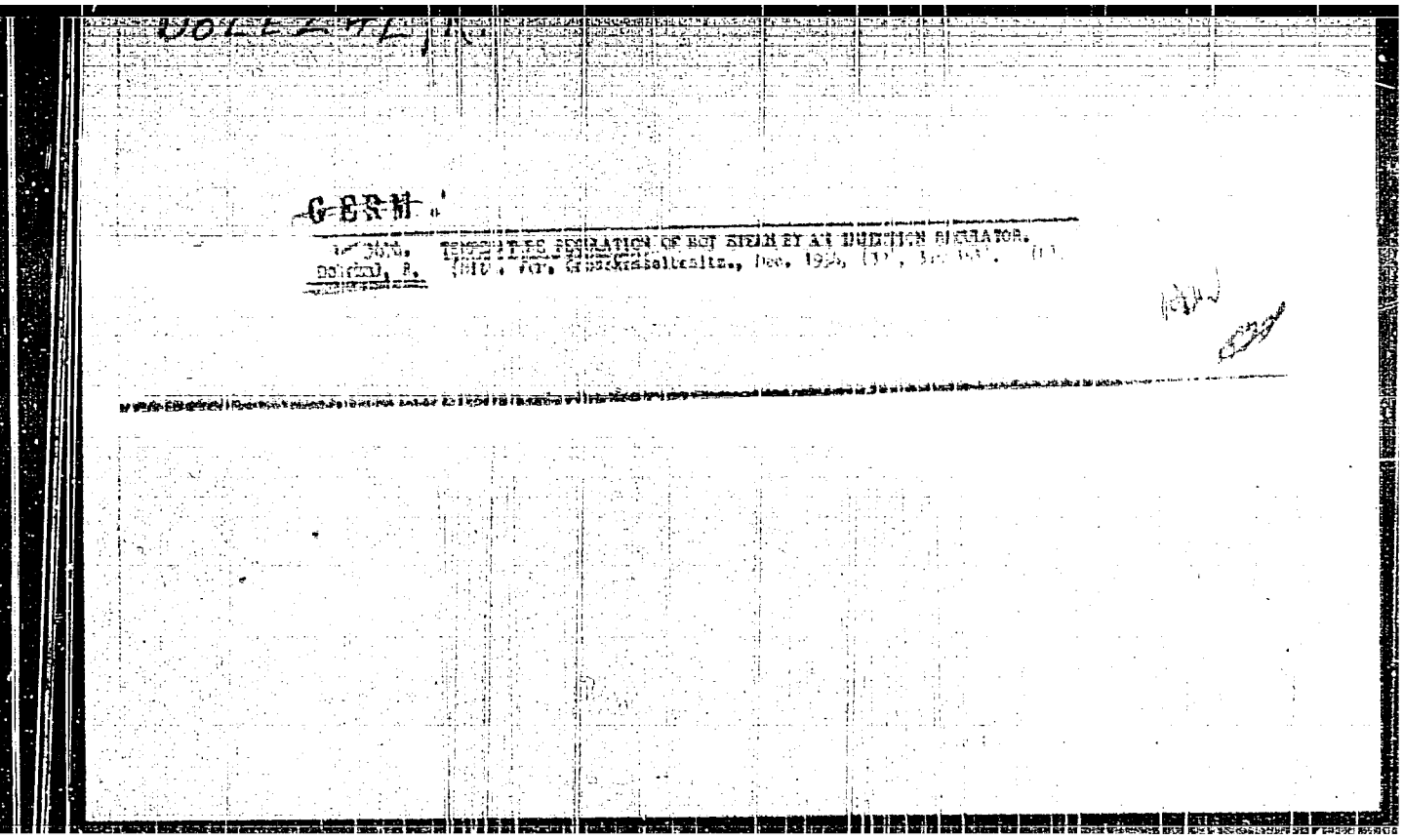

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DOLEZHAL, R.

AID P - 1539

Subject : USSR/Electricity

Card 1/1 Pub. 26 - 35/36

Author : Prof. R. Dolezhal (Czechoslovakia)

Title : New method of controlling superheating by injection of saturated steam condensate

Periodical : Elek. sta., 3, 61-63, Mr 1955

Abstract : The article is a summary of two articles by the author, published in the Czechoslovak periodical "Strojirenstvi" (Machine Building) (1952, No.11 and 1954, No.4), concerning a new boiler with 220 t/hr capacity and new methods of superheat control. Seven drawings

Institution: None

Submitted : No date

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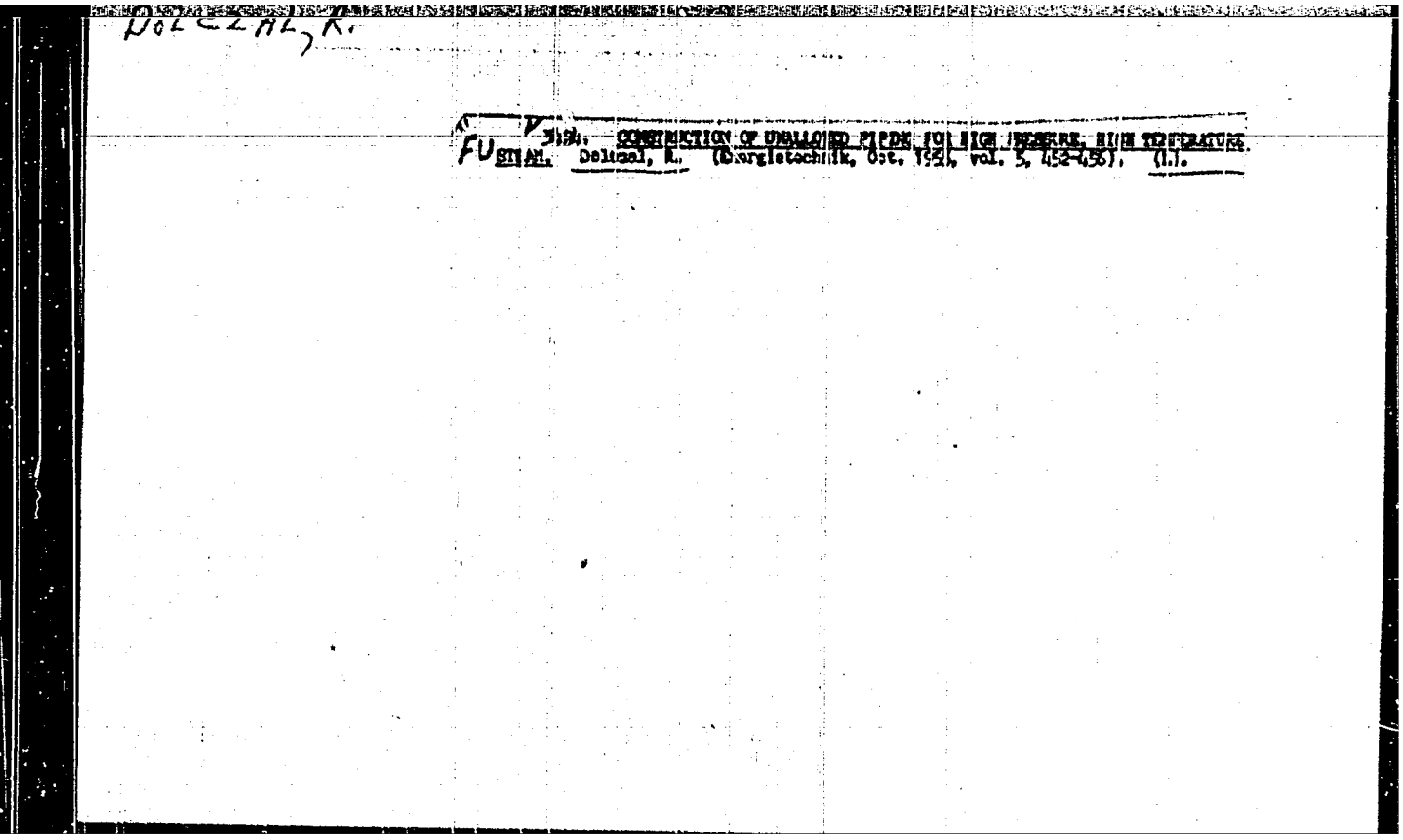

DOLEZAL, K.

FU [illegible], CONSTRUCTION OF UNALLOYED PIPES FOR HIGH PRESSURE, HIGH TEMPERATURE STEAM. Dolezal, K. (Energietechnik, Oct. 1955, vol. 5, 452-456), (1.).

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DOLEZAL, R.

"Process of combustion in smelters."

ENERGETIKA, Praha, Czechoslovakia, Vol. 5, no. 3, March 1955

Monthly List of East European Accessions Index (EEAI), Library of Congress
Vol. 8, No. 8, August 1959

Unclassified

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000410810003-4

DOLEZAL, R.

Some remarks on maintaining water level in high-pressure boiler drums with natural flow of water. p. 177.

STROJIRENSTVI Vol. 5, no. 3, Mar. 1955

Czechoslovakia

Source: EAST EUROPEAN LISTS Vol. 5, no. 7 July 1956

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DOLEZAL, R.

Economy of material and heat in power plants, p. 403, STROJIRENSTVI (Ministerstvo strojirenstvi) Praha, Vol. 5, No. 6, June 1955

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 4, No. 12, December 1955

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000410810003-4

DOLEŽAL, R.

Problems in the production of high-pressure boilers. p. 345.

Vol. 5, no. 9, Sept. 1955
ELEKTROTECHNICKY OBZOR
Praha, Czechoslovakia

Source: East European Accession List. Library of Congress
Vol. 5, No. 8, August 1956

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KOLESAL, R.

KOLESAL, R. Development of slag-smelting boilers in Czechoslovakia since 1945. Tr. from the Czech. p. 281.

Vol. 8, No. 8, Aug. 1955.
MAGYAR ENERGIAGAZDASAG.
TECHNOLOGY
Budopest, Hungary

So: East European Accession, Vol. 5, No. 5, May 1956

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POLCZAL, R.

CZECH

5403. FIRE TUBE WALLS IN SLAG TAP FURNACES. Dolczal, R. (Combustion, N.Y., Jan. 1955, vol. 26, 43-47). This paper is one of a series of reports on the design and operational experience of Czech large-sized high pressure boilers with slag tap furnaces. It discusses the reasons for choosing certain designs and remarks them in the light of operational data. (L).

H.F.P.

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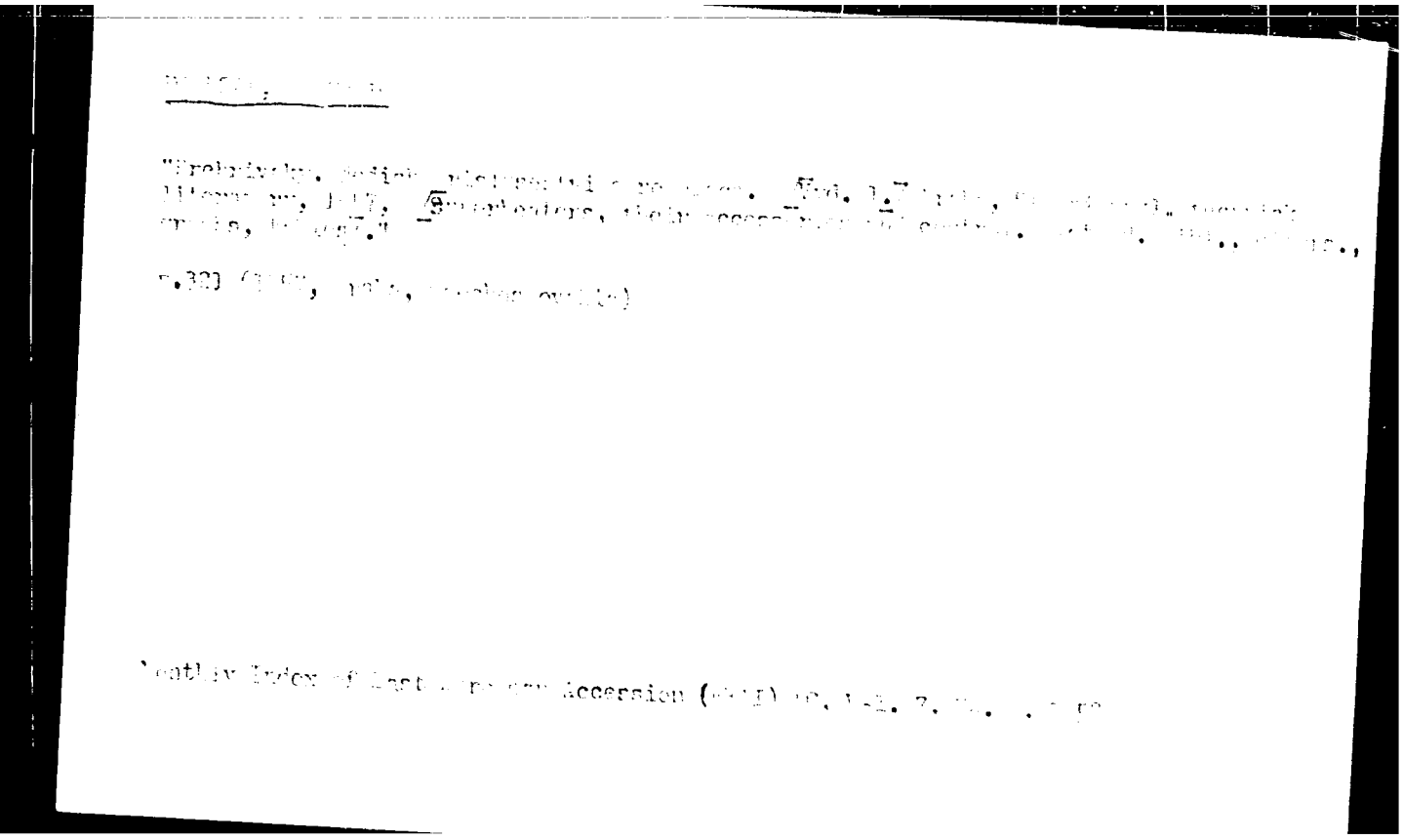

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DOLEZHAL, R., doktor tekhnicheskikh nauk, professor.

Five years experience in regulating steam temperature by injecting a high pressure condensate. Teploenergetika 4 no.9:81-84 S '57. (MLRA 10:8)

(Boilers)

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000410810003-4

DOLEZAL, R.

Four years of experience with steam temperature controls by the injection of high-pressure condensate. p.81.
(Energetika, Vol. 7, No. 2, Feb. 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

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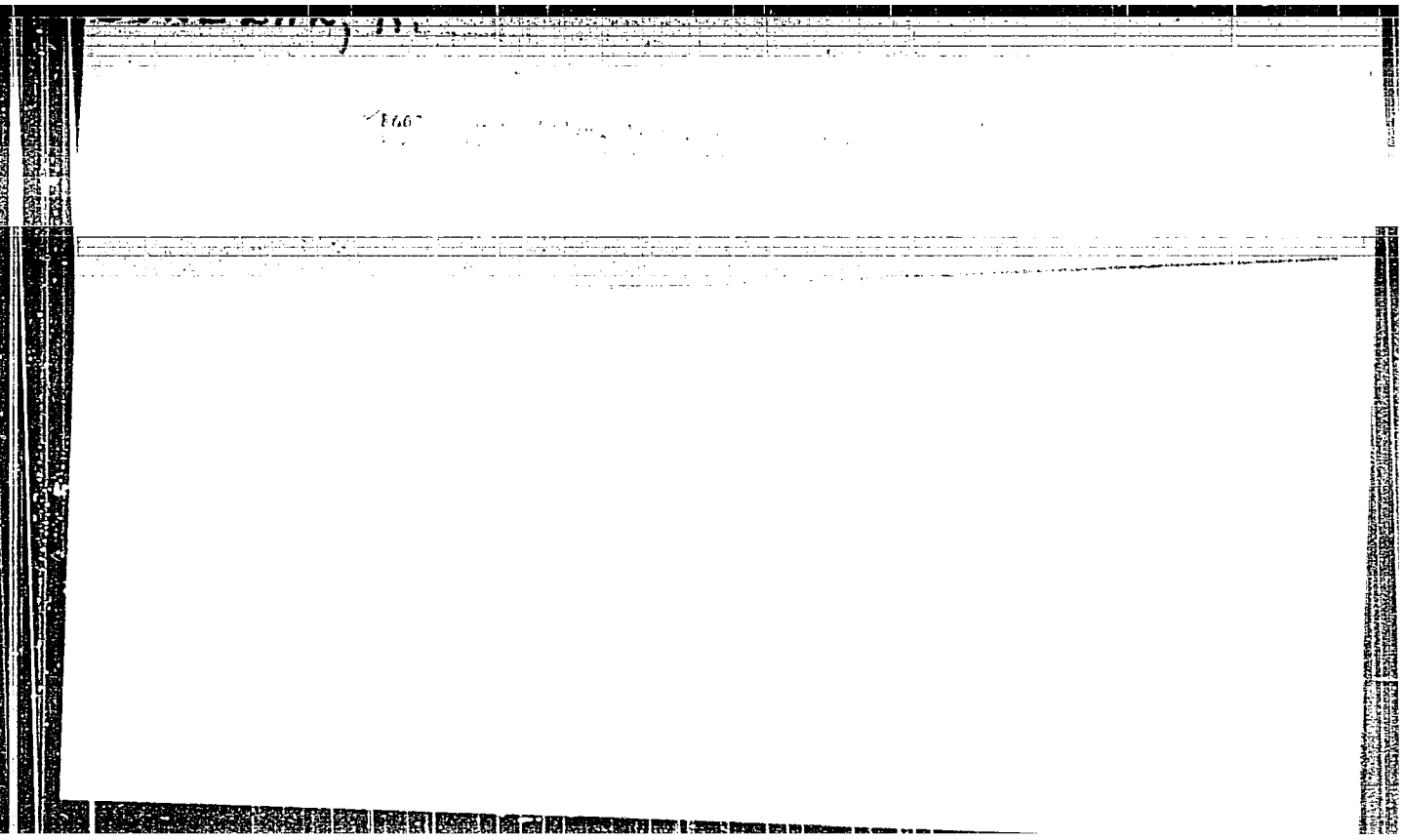

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DOLEZAL, R. ZELNICEK, M.

Some interesting details of West German caloric-power stations. p. 146.

(Energetika. Vol. 7, no. 3, Mar. 1957. Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 10, October 1957. Uncl.

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DOLEZAL, R.

Improving the thermal efficiency of power stations by utilizing the waste heat from slag. p. 173. (Strojirenstvi, Vol. 7, No. 3, Mar 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

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DOLEZAL, R.

Two-stage evaporation in steam boilers using demineralized feed water. p. 249. (Strojirenstvi, Vol. 7, No. 4, Apr 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

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DOLEZAL, Richard (Prof. Dr. Ing.)

Richard Dolezal, "Verfeuerung der deuchten Brennstoffe in den Schmelzfeuerungen der CSR," Energie (Duesseldorf), 9/5, May 1957, pp. 179-82.

The author is affiliated with the Ostrava Mining Academy.

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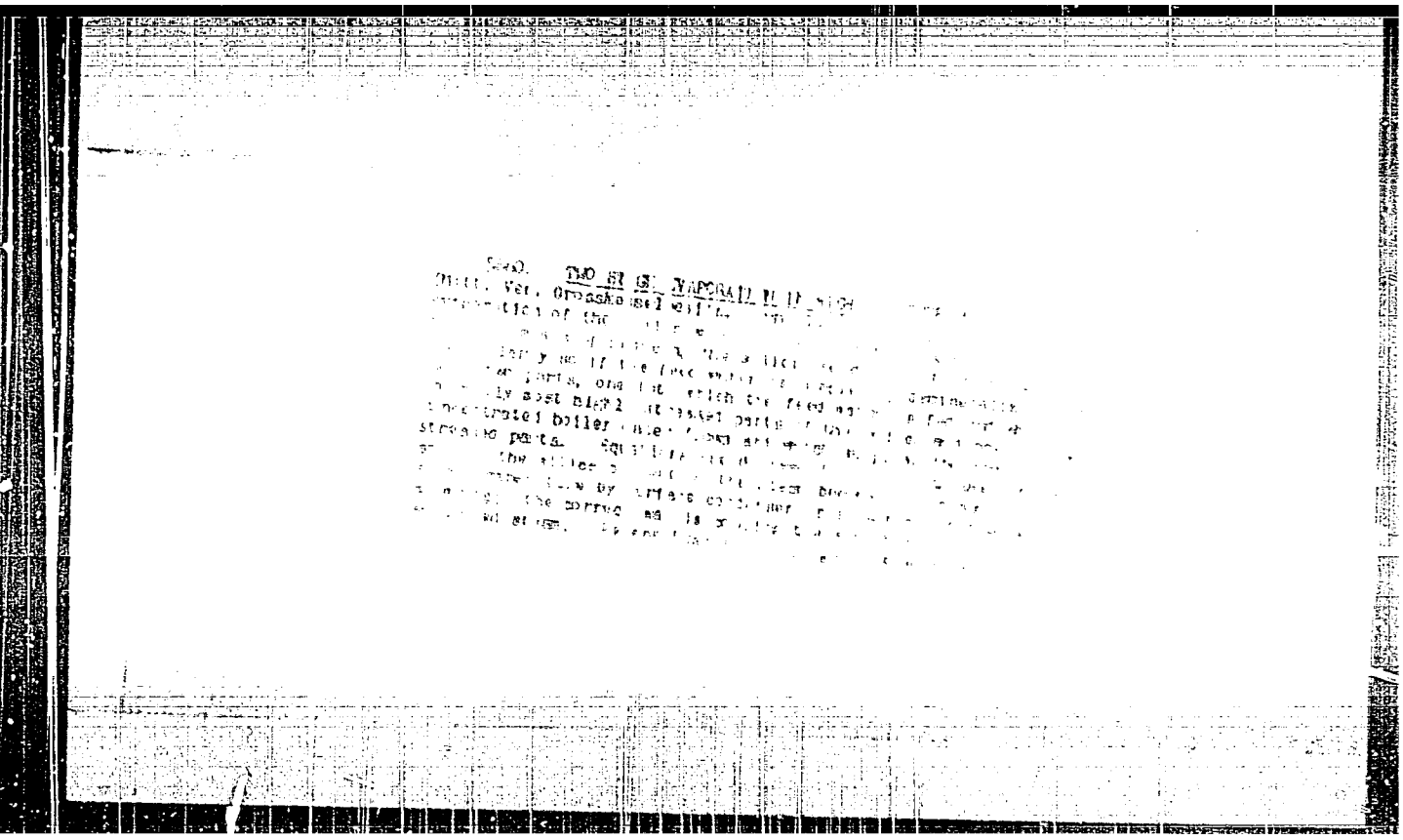

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SOV/96-58-8-18/22

AUTHOR: Professor R. Doležal (Czechoslovakia)

TITLE: Using the Heat of Slag (Ispol'zovaniye tepla shlaka)

PERIODICAL: Teploenergetika, 1958, Nr 8, pp 86-90 (USSR)

ABSTRACT: It is becoming increasingly important to use the heat of slag from furnaces equipped for liquid slag removal. The temperature of slag leaving the furnace depends on its melting point and other factors, but is usually between 1300 and 1600°C with a heat content of 300 - 500 kcal/kg. Slag does not easily give up its heat to the cooling medium because it is viscous and of poor thermal conductivity. It can generally be broken up by the internal stresses set up by rapid cooling in water. Recent attempts to granulate dry slag have not yet been applied to furnaces with liquid slag removal. Feed-water for power stations is usually prepared by intensive de-salting. However, it is difficult to apply this process to water containing organic matter. If the water delivered to the de-salting plant is obtained by condensing steam produced when the slag is being quenched, it is relatively free from organic substances, iron and some other impurities which are not

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evaporated. Waste heat from slag is most easily absorbed by Heat- and Electric-Power Stations for heating system-water. An equipment of this kind is illustrated schematically in Fig 1. In this installation, steam is separated from the hot water, which returns to cool the slag. The steam serves to convey heat, and is condensed in a heat-exchanger. The heat-exchanger heats either the air for the furnace or the feed-water. The condensate provides make-up after purification. A brief mathematical analysis of the system is given. The circulating water is maintained at a temperature not greater than 80 - 90°C, for reasons which are explained, and the requisite quality of the crude water supply is discussed. One way of further improving the efficiency of boiler equipment is to reduce the outgoing flue gas temperature still more by means of additional air-heaters. Care must, of course, be taken to avoid condensation troubles. Heat from the slag may be also used for air-heating, and the advantages of this measure are discussed.

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Using the Heat of Slag SOV/96-58-8-18/22

Graphs of the heat lost in the flue gases, as functions of the proportion of the gas used to dry fuel, are shown in Fig. 4.

There are 4 figures, 1 table, 12 literature references (7 German, 4 English, 1 Russian)

1. Slags--Cooling 2. Steam--Applications 3. Water--Heating
4. Slags--Application

Card 3/3

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DOLEZAL, R.

Dynamics of two-stage evaporation. p. 87

STROJIRENSTVI (Ministerstvo tezkeho strojirenstvi, ministerstvo presneho strojirenstvi Ministerstvo automobiloveho prumyslu a zemedelskych stroju)
Praha, Czechoslavakia
Vol. 9, no. 2, Feb. 1959

Monthly list of East European Accessions (EEAI), LC, Vol. 8, no. 7
July 1959
Uncl.

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DOLEZAL, R.

Theory and properties of directly and indirectly cooled liquid-slag fireboxes. P 487

STROJIRENSTVI (Ministerstvo tezkeho strojirenstvi, Ministerstvo vscobecnebo strojirenstvi) Praha, Czechoslovakia Vol. 9 no. 7 July 1959

Monthly List of East European Accessions (EEAI), LC. Vol. 9, no. 2, Feb. 1960

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DOLEZAL, R., prof., inn., dr.

Four years of experience with steam temperature control by injecting a high-pressure condensate. Energetika Cz 7 no.2:81-84 F '57.

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DOLEZAL, R., prof., inz., dr.

Some remarks on superheating control by condensate injections. Strojirenstvi 12 no.4:266-270 Ap '62.

1. Ceske vysoke uceni technicke, Praha.

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HUBER, Rudolf, inz. (Ostrava I, Mlynska 11); DOLEZAL, Richard, inz., dr. (Ostrava)

Removing sediments from the water in steam boilers.
Energetika Cz 12 no.10:558 O '62.

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DOLEZAL, B., prof., ins., dr.

Comparison of various methods of fast increasing the output of generator sets with intermediate steam overheating. Strojirenstvi 13 no.5:323-335 My '63.

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DOLEZAL, R., prof., inz., dr.

"Control of steam installations" by P. Profos. Reviewed by R. Dolezal. Strojirenstvi 13 no.5:397 My '63.

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DOLEZAL, Richard, prof., ing., dr.

Determining the conditions in the asymmetry compensation of combustion temperature fields by branch crossing the steam boiler pressure system. Stroj cas 14 no.2:97-121 '63.

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DOLEZAL, Richard, prof. dr. inz. (Ostrava)

Device for water injection in superheated steam of steam boilers. Energetika Cz 14 no.6:310 Je '64

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L 31207-66 EWT(1)/ETC(f) WW

ACC NR: AP6022598 SOURCE CODE: CZ/0032/65/015/012/0883/0886

AUTHOR: Dolezal, R. (Professor; Doctor; Engineer; Doctor of sciences) 63 B

ORG: Czech Institute of Technology, Prague (Ceske vysoke uceni technicke)

TITLE: Determination of the salt concentration in the boundary layer of boiler tubes from the similarity of heat and mass transfer

SOURCE: Strojirenstvi, v. 15, no. 12, 1965, 883-886

TOPIC TAGS: heat transfer, laminar boundary layer, steam boiler, mass transfer, turbulent boundary layer

ABSTRACT: The article deals with the determination of the salt concentration in the boundary layer of boiler tubes. Applying the theory of similarity between the mass and heat transfer, the author maintains that the concentration can be defined as an intermediate between conditions present when the boundary layer is a finite one and those in the layer of infinite turbulence. This paper was presented by Engineer J. Kriska. Orig. art. has: 3 figures and 27 formulas. [Based on author's Eng. abst.] [JPRS]

SUB CODE: 13, 20 / SUBM DATE: none / ORIG REF: 001 / OTH REF: 003

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DOLEZAL, S.

Factors which affect most the profitableness of potato growing; remarks on the 1957 crop.

P. 31. (Rolnicke Hlasy) Vol. 11, no. 12, Dec. 1957. Praha, Czechoslovakia.

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On the preparation of some [redacted]-lactones. Coll Cz chem 27 no.10:2408-2412 O '62.

1. Institut fur organische Chemie, Technische Hochschule fur Chemie, Prag.

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DOLEZEL, S.; Institute for Normal and Pathological Physiology, Slovak Academy of Sciences (Ustav pre normalnu a patologicku fyziologiu SAV), Bratislava.

"Adrenergic Innervation of Renal Vasculature as Determined by Fluorescence."

Prague, Ceskoslovenska Fysiologie, Vol 14, No 5, Oct 1965; p 342-343.

Abstract: In kidneys of rats and dogs, fluorescence histochemistry revealed the precise location of adrenergic nerve endings in the glomeruli, vasa recta and renal pelvic area; agreeing with the recent electron microscopic findings. 2 Western references. Paper presented at the 15th Physiology Days, Olomouc, 27 May 65.

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VENCLIK, Hynek; DOLEZAL, Stanislav

Endoscopic findings in pemphigus of the mucous membranes. Cesk. otolar. 5 no.2:94-97 Apr 56.

1. Otolaryngologicke oddeleni primar Dr. H. Venclik, KUNZ-nemocnice v Ceskych Budejovicich.

(BRONCHOSCOPY, in various diseases,
pemphigus (Cz))
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tracheobronchial, endoscopy (Cz))
(TRACHEA, diseases,
pemphigus, endoscopy (Cz))

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DOLEZAL, Stanislaw

Anatomical studies on gastric vascularization in gastric ulcer and in cancer complicated by hemorrhage. Polski przegl. chir. 30 no.5: 460-466 May 58.

(PEPTIC ULCER, pathology,
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(STOMACH NEOPLASMS, compl.
hemorrh., vasc. pathol. (Pol))

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DOLEZAL, Stanislaw; KUS, Jan

Branching of gastric arteries. Polski przegl. chir. 31 no.6:681-684 June 59.

1. Z I Kliniki Chirurgicznej A. M. w Krakowie Kierownik: prof. dr J. Boguss z Zakladu Anatomii Opisowej i Topograficznej A. M. w Krakowie p.o. Kierownika: adiunkt J. Kus.
(STOMACH, blood supply)

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Dolez. Al 35

Distr: 4E3d

The action of Grignard reagents on the amide group. XXIX. The Grignard reaction with *N*-methylglutarimide and the structure of its products. R. Lukeš, A. Fábryová, S. Doleźal, and L. Novotný (Vysoká škola chem. technol., Prague). *Collection Czech. Chem. Communs.* 25, 1063–9 (1960)(in German); cf. *CA* 54, 12106*d*.—Spectroscopic study and dehydration expts. showed that the products mentioned in the title were compds. with the formula MeNHCO(CH$_2$)$_3$COR (I), R = Et, Bu, C$_7$H$_{15}$ (II), C$_9$H$_{19}$, C$_{11}$H$_{23}$ (III), C$_{15}$H$_{31}$ (IV), Ph (V), and PhCH$_2$ (VI). Adding with agitation and cooling with ice 13 g. *N*-methylglutarimide (VII) to PhMgBr (prepd. from 32 g. PhBr, 4.8 g. Mg, and 100 ml. Et$_2$O), keeping the mixt. 30 min., decompg. with aq. HCl and ice, steam distg. the Et$_2$O layer to remove the solvent and Ph$_2$, concg. the distn. residue, and crystg. from C$_6$H$_6$ and petr. ether gave 5 g. V, m. 94°, and mother liquors whose hydrolysis with 10% H$_2$SO$_4$ yielded PhCO(CH$_2$)$_3$CO$_2$H, m. 127.5–8° (H$_2$O). Adding with agitation and cooling 13 g. VII in 300 ml. C$_6$H$_6$ to PhCH$_2$MgCl (prepd. from 25 g. PhCH$_2$Cl, 4.8 g. Mg, and 100 ml. Et$_2$O) and working up as above gave 19.5 g. VI, m. 68° (C$_6$H$_6$–petr. ether), whose hydrolysis with 20% H$_2$SO$_4$ yielded PhCH$_2$CO(CH$_2$)$_3$CO$_2$H, m. 62.5–3° (petr. ether) [*cf.* the value 265° of Born, *et al.* (*CA* 48, 5122*d*)]. Refluxing (6 hrs.) II, III, and IV, resp., with Ac$_2$O, removing the cryst. starting compd., and distg. the filtrate gave RC:CH.CH$_2$.CH$_2$.C(O).NMe (R and % yield given): C$_7$H$_{15}$, 53, b$_{11}$ 102–6°, n_D^{20} 1.4930; C$_9$H$_{19}$, 65, b$_1$ 168–71°, n_D^{20} 1.4837; and C$_{15}$H$_{31}$, 32, b$_1$ 184–90°, m. 80–2° (Et$_2$O). Hydrogenation (PtO$_2$) of the 6-Et and 6-heptyl derivs. of 1-methyl-3,4-dihydro-2-pyridone in EtOH and AcOH, resp., gave 1-methyl-6-ethyl-2-piperidone, b$_1$ 111–3°, n_D^{20} 1.4321, and 1-methyl-6-heptyl-2-piperidone, m. 71–2° (Et$_2$O). JiH Plimi—

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Histological studies on the vascularization of the gastric ulcer area. Polski przegl.chir.32 no.2:153-158 F '60.

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(PEPTIC ULCER pathol.)

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On the preparation of some γ-lactones. Coll Cz chem 27 no.10:2406-2412 O '62.

1. Institut fur organische Chemie, Technische Hochschule fur Chemie, Prag.

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KUS, Jan; CZECH, Boleslaw [deceased]; DOLEZAL, Stanislaw

Ramifications of the veins of the stomach. Folia morphol 22 no. 2:153-160 '63.

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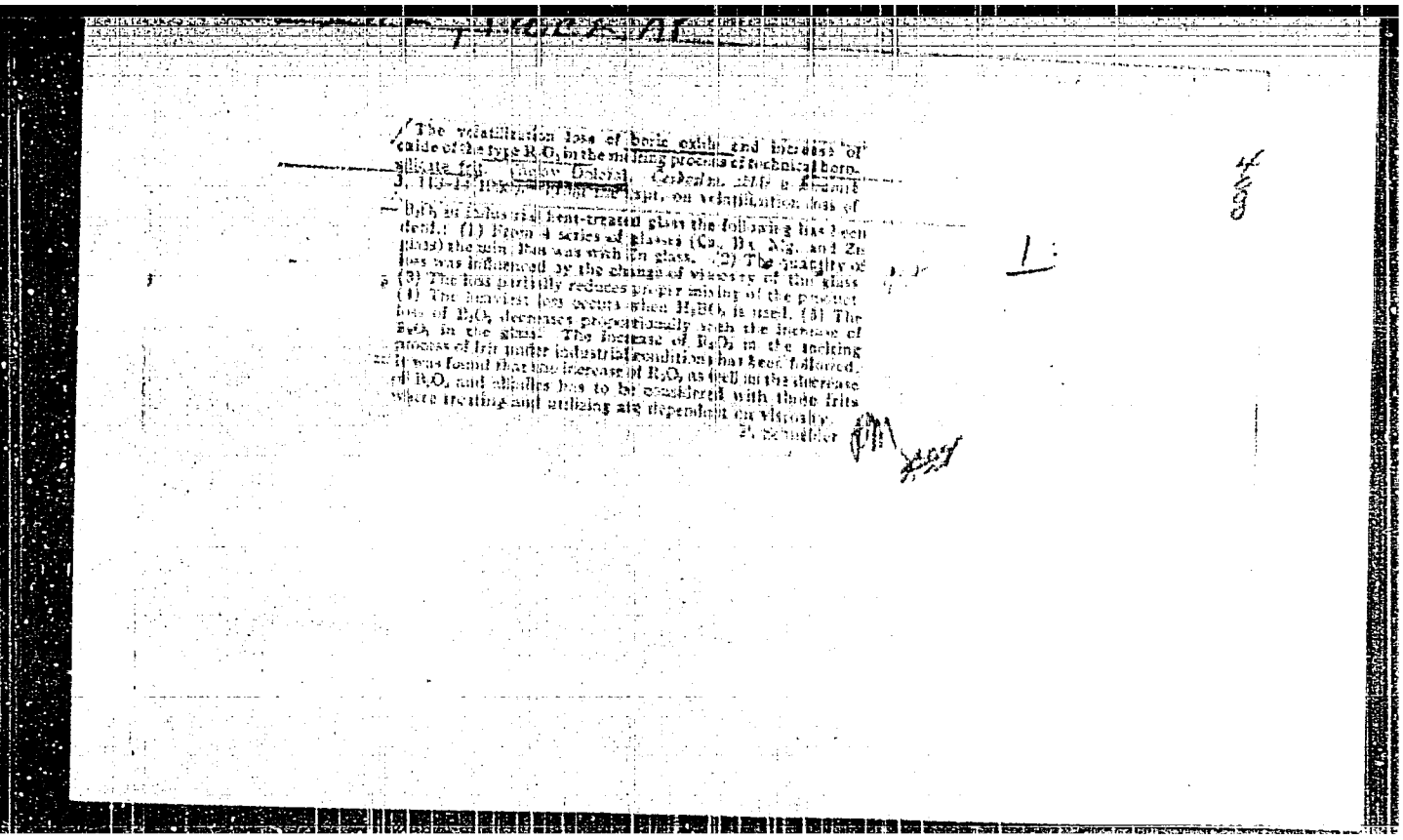

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DOLEZAL, V.; HAUSNER, M.

Our experiences with ambulatory Tofranil therapy. Activ. nerv. sup. 4 no.2:228 '62.

1. I ustav lekarske chemie fakulty vseobecneho lekarstvi Karlovy university v Praze, Psychiatricke oddeleni polikliniky fakulty vseobecneho lekarstvi Karlovy university v Praze.

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DOLEZAL, Vladimir, MUDr. CSc.; HUSA, Josef, major inz.; Technicka spoluprace: SVACINKOVA, Bozena; ZEMANOVA, Zdenka; RYBAK, Frantisek

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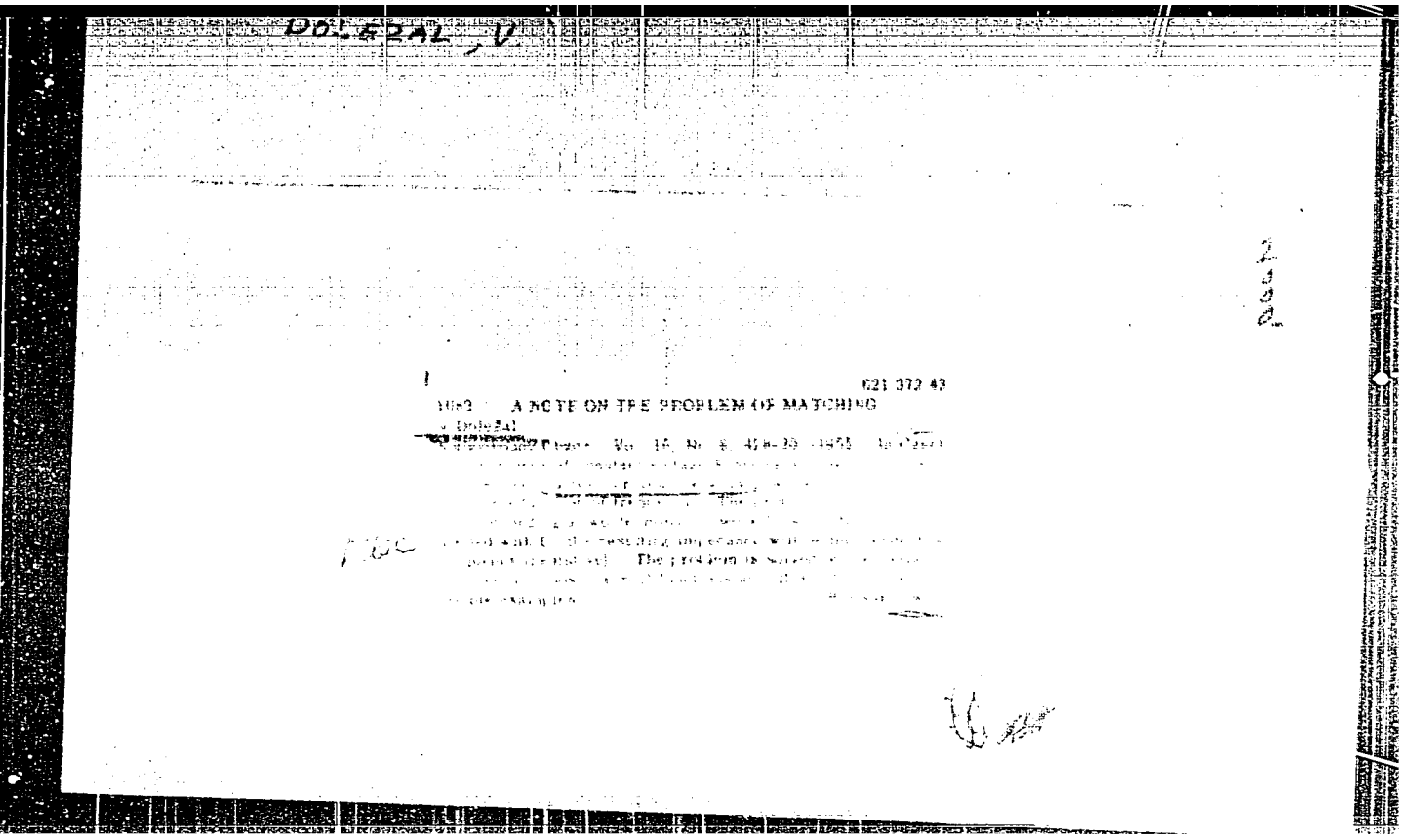

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Theory of approximation. p. 325. (SLABOPROUDY OBZOR, Vol. 16, No. 6, June 1956, Praha, Czechoslovakia)

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Dolezal, V. V. Votruba

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CASOPIS PRO PESTOVANI MATEMATIKY. (Ceskoslovenska akademie ved. Matematicky ustav) Praha
Vol. 81, no. 1, Apr. 1956

Source: EEAL - LC Vol. 5, No. 10 Oct. 1956

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Mathematical problems on the theory of electrical circuits; a report on the lecture delivered by Vaclav Dolezal before the Prague Circle of Mathematicians on April 16, 1956. p. 475.
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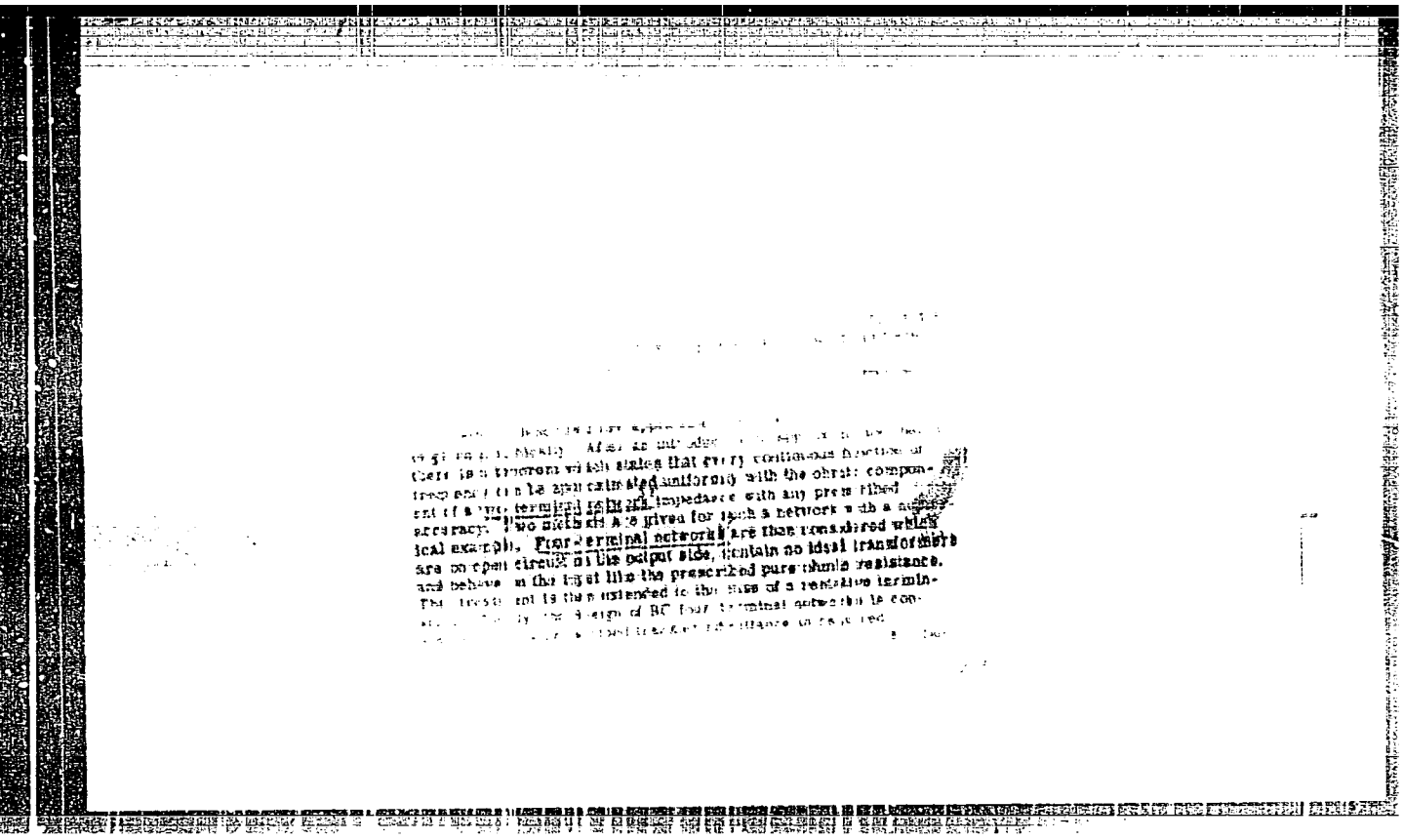

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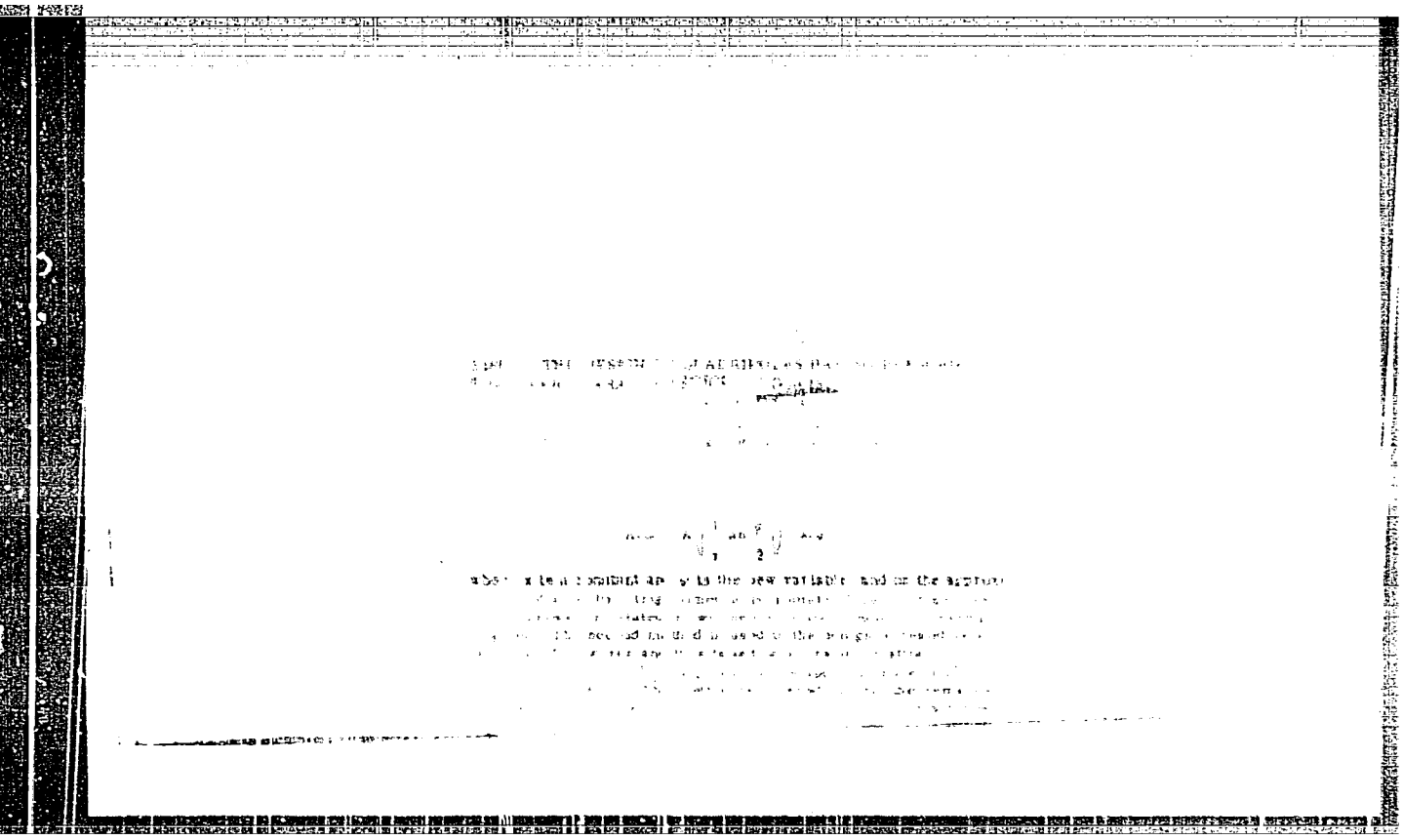

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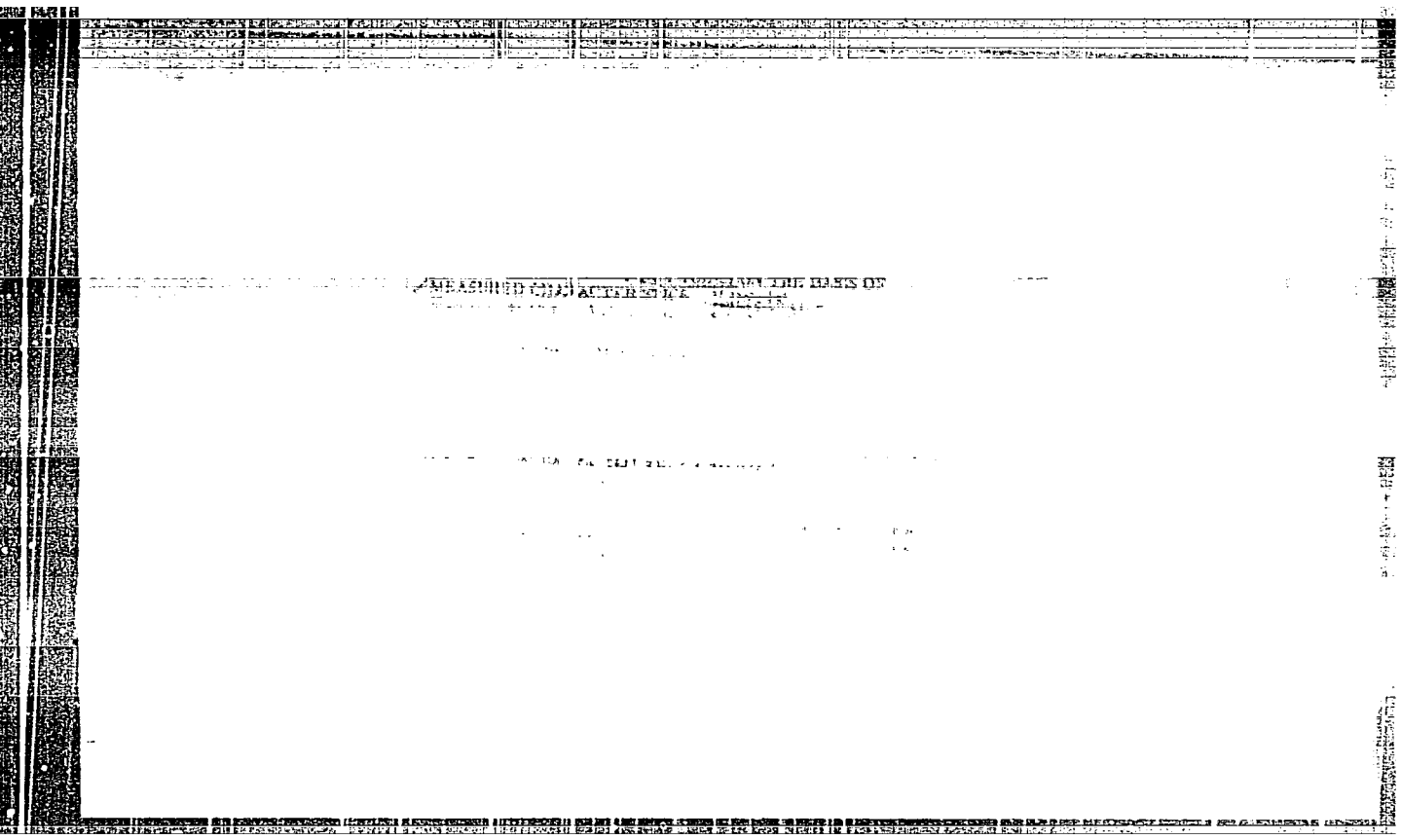

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Unclas

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DOLEZAL V.

CZECHCSLOVAKIA/Radio Physics - General Problems. I

Abs Jour : Ref Zhur Fizika, No 1, 1960, 1600

Author : Dolezal, Vaclav; Kurzuveil Jaroslav
Inst :
Title : Concerning Generalized Functions

Orig Pub : Slaboproudy obzor, 1959, 20, No 1, 13-20

Abstract : The authors give in elementary form the principal information and generalized functions (distributions), the theory of which is one of the new fields of mathematics, which is finding an ever increasing application, particularly for solving problems in radio engineering and electronics. In the first part of the article the concept of distributions of L. Schwarz is introduced. The favorable properties of the distributions compared with functions are indicated, for example, the existence of derivatives of all orders in the distributions, the possibility of term-by-

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DOLEZAL, V.

"Analysis of linear circuits by means of distributions." P. 302.

SLABOPROUDY OBZOR. (Ministerstvo presneho strojirenstvi, Ministerstvo spoju a Vedecka technicka spolecnost pro elektrotechniku pri CSAV). Praha, Czechoslovakia, Vol. 20, No. 5, May 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000410810003-4

DOLEZAL, V.

Conditions under which the response of a linear system is monotonic.
p. 672

SLABOPROUDY OBZOR. (Ministerstvo presneho strojirenstve, Ministerstvo spoju a Vedecka technicka spolecnost pro elektrotechniku pri CSAV)
Praha, Czechoslovakia, Vol. 20, no. 11, Nov. 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 9, no. 1,
Jan. 1960

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000410810003-4

DOLEZAL, V.

Asymptotic formulas for solution of differential equations y" ++f(t)y=0. p. 451

CASOPIS PRO PESTOVANI MATEMATIKY. (Ceskoslovenska akademie ved. Matematicky ustav) Praha, Czechoslovakia

Vol. 83, no. 4, Nov. 1959

Monthly list of East European Accessions (EEAI) LC. VOL. 9, no. 1 January 1960

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S/044/62/000/004/049/099
C111/C333

AUTHOR: Doležal, Václav

TITLE: On the dynamics of linear systems

PERIODICAL: Referativnyy zhurnal, Matematika, no. 4, 1962, 57, abstract 4B261. (Acta techn." (ČSR), 1960, 5, no. 1, 19-33)

TEXT: For the system of integro-differential equations

$$Ax(t) + B\dot{x}(t) + C\int_0^t x(\tau)d\tau + d = f(t) , \qquad (1)$$

where A,B,C are constant r×r matrices, x,d,f -- r-dimensional vectors, the notions of classical and of generalized solutions are introduced. It is assumed that the vector function f(t) defined on the interval $[0,\infty)$ satisfies the following conditions : 1.) the Lebesgue integral $\int_0^t f(\tau)d\tau$ exists for all $t \geq 0$; 2.) there exist numbers $\xi, \eta \geq 0$ depending on f such that the inequality $\left|\int_0^t f(\tau)d\tau\right| \leq \eta e^{\xi t}$ holds for all

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On the dynamics of linear systems

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$t \geqslant 0$. A function $x(t)$ with continuous derivative is called a classical solution of (1), if it transforms the equation (1) into an identity. A function $x(t)$ is called a generalized solution of (1) with the initial value b, if it satisfies the equation

$$A\int_0^t x(\tau)d\tau + B[x(t) - b] + C\int_0^t \int_0^{\tau} x(\sigma)d\sigma d\tau + td = \int_0^t f(\tau)d\tau \quad . \qquad (2)$$

The author gives conditions for the existence of a classical and a generalized solution. A considerable part of the paper is devoted to the physical interpretation of certain solutions of the equation (1) (mainly to the application of the Kirchhoff law to electric circuits).

Notes of the reviewer : 1. One can abandon the restriction concerning the increase of the function

$$\Psi(t) = \left\| \int_0^t f(\tau)d\tau \right\| \leqslant \eta e^{\xi t} \quad , \text{ if one}$$

uses the operational calculus of Mikusinski. 2. For the case of

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On the dynamics of linear systems

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C111/C333

continuous f(t) more general systems than (1) have been considered in the book of the reviewer (RZhMat, 1959, 482K), where under the assumption det B ≠ 0 the restriction on the increase was omitted for f(t). However, it must be mentioned that the case det B = 0 is investigated more explicitly in the reviewed paper.

[Abstracter's note : Complete translation. The name of the reviewer is Ya.B. Bykov.]

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B112/B202

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AUTHOR: Doležal, Václav, Engineer

TITLE: On some criteria of monotony of building-up processes in linear systems

PERIODICAL: Aplikace Matematiky, v. 5, no. 1, 1960, 45-62

TEXT: The author studies the possibility of drawing conclusions on the behavior of the original function f(t) on the basis of the behavior of the Laplace transform F(p). He studies linear dynamic systems which are subject to the perturbation f(t) causing the reaction v(t). The following relation exists between v(t) and f(t) and their Laplace transforms V(p) and F(p), respectively: $V(p) = A(p)F(p)$ if the system was first in equilibrium position. The "transfer function" A(p) is assumed to be a rational function. The amount $\mathfrak{M}(\sigma)$ of the "totally monotonic" functions over the interval (σ,∞) is of great importance. Totally monotonic functions are functions whose derivatives are all monotonic functions. $\mathfrak{M}(\sigma)$ has ring property. The author demonstrates that $(-1)^k F^{(k)}(p) > 0$ holds for $p \in (\sigma,\infty)$, if $F(p) \not\equiv 0$ is the Laplace transform of a continuous non-negative original

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On some criteria of monotony...

function $f(t)$. If the Laplace integral of $f(t)$ also converges in the half-plane Re $p > \sigma$, then $f(t) \geq 0$ in $\langle 0, \infty)$ is equivalent to $F(p) \in \mathfrak{M}(\sigma)$. Hence, it follows that systems with totally monotonic transfer function have a monotonic reaction. The author also proves the inversion. He then establishes criteria for rational $F(p) \in \mathfrak{M}(\sigma)$. He deals with the case of exclusively real poles of $F(p)$ independently of the case of complex poles. To establish a general criterion, he introduces the rational system of functions $\mathfrak{R}(\alpha)$ whose functions $G(p)$ have real coefficients, which have no poles in the half-plane Re $p > \alpha$ and a positive real part. The criterion reads as follows: if $G(p) \in \mathfrak{R}(\alpha)$, then $G(p)/(p - \alpha)^2 \in \mathfrak{M}(\alpha)$ and $G(p)/(p - \alpha)^2$ is the Laplace transform. Finally, the author establishes a criterion for the appearance of arbitrary functions to $\mathfrak{R}(\alpha)$. There are 3 references: 1 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Matematický ústav ČSAV, Praha (Mathematical Institute of the ČSAV, Prague)

SUBMITTED: December 1, 1958

Card 2/2

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Z/042/61/000/009/001/003
E140/E563

AUTHOR: Doležal, Václav

TITLE: The solution of ordinary linear systems with time varying elements

PERIODICAL: Elektrotechnický časopis, no.9, 1961, 549-565

TEXT: The article constitutes an exposition of the operational method of solving ordinary linear systems with time varying elements, using an operational calculus based on the Schwartz distribution. The type of problem is illustrated in Fig.2, where the arrows indicate the time varying elements. First a certain product of a smooth function of two variables $W(t,\tau)$ with a distribution is introduced, this product being a generalization of an integral with the kernel $W(t,\tau)$. With the aid of this product certain operators are then introduced and their properties are shown; namely, two constructions of an inverse operator are given. These results are then used for the solution of an integrodifferential system of equations with variable coefficients, by means of which the dynamics of any general parametric system is described. Finally, it is shown that the introduced operators

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represent a generalization of the network's classical functions (i.e. f.i. the impedance and admittance) to the case of systems with variable elements; this fact is used for the direct investigation of series-parallel systems. The application of the given results is illustrated on several examples. There are 2 figures and 4 Soviet-bloc references.

B

ASSOCIATION: Matematický ústav Československé akademie věd, Praha
(Institute of Mathematics, Czech AS, Prague)

SUBMITTED: February 24, 1961

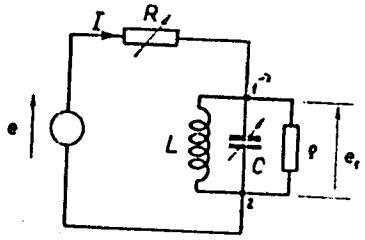

Fig. 2

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AUTHOR: Doležal, Václav

TITLE: The use of operators in the theory of linear dynamic systems

PERIODICAL: Aplikace matematiky, v. 6, no. 1, 1961, 36-66

TEXT: The article describes the use of certain linear operators in the analysis of linear physical systems consisting of concentrated time variable elements. The simple case is shown in Fig. 1. where L and C are independent of time; the resistance is given by R(t); if EMF is E(t) the current is to be found (assuming that current is at rest for $t < 0$) and

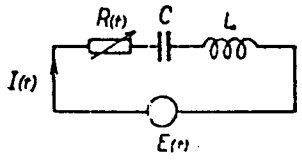

Fig. 1

$$L\frac{dJ(t)}{dt} + R(t)J(t) + \frac{1}{C}\int_0^t J(\tau)\,d\tau = E(t), \quad t \geq 0. \qquad \text{(a)}$$

is valid: It can be solved most simply by means of "Heaviside Operators"; assuming $R(t) - R_0 = \text{const.}$ the solution is given

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(J(t) = AE(t)). The next stage is concerned with cases where R(t) is not constant, where L and C are also time-dependent, where in Eq. (a) the current is not at rest for $t < 0$, etc. The author assumes that the reader is familiar with the theory of Schwartz's Distributions and for proofs of certain statements in the article he refers the reader to his own work (Ref. 3: Über eine Klasse linearer Operatoren, Cas. pro pestovani matematiky No. 2. 1961) dealing with distribution theory and to Y. Matyash (Ref. 5: Metodika resheniya lineynykh differentsial'nykh uravneniy s peremennymi koeffitsientami pri pomoshchi modeliruyushchikh ustroystv, Automatika i telemekhanika, v. 20, 7, 1959) for the use of analogue computers in solving homogeneous differential equations. Before solving a number of systems of integral differential equations, the author states that the values of symbols used here are to be found in I. M. Gel'fand and G. Ye. Shilov (Ref. 1: Obobshchennyye funktsii i deystviya nad nimi, Gos. izd. fiziko-matem. lit., Moskva, 1958). He states: "Let D_1 be the system of all distributions disappearing in the interval $(-\infty, 0)$" and among numerous axioms cites the

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The use of operators...

following, stressing their particular importance: 4) If $f \in D_1$ is regular, $f(t) = 0$ is valid almost everywhere in the interval $(-\infty, 0)$. F_1^2 is assumed to be the system of all real functions $W(t,\tau)$, defined in the quadrant $t, \tau \geq 0$; 5) The functional $[Wf]$ belongs to the system D_1, and does not depend on the function $W(t,\tau)$ and $\phi_0(t)$, if these fulfill $\overline{Q}_{\phi_0} \subset (-\infty, 0)$, $\int_{-\infty}^{\infty} \phi_0(\tau)\, d\tau = 1$; 10) Let $W_1(t,\tau)$, $W_2(t,\tau) \in F_1^2$; $f \in D_1$; then

$$\left[W_1 \left[W_2 f\right]\right] = \left[(W_1 \times W_2) f\right] . \qquad (4)$$

the associative law remains valid for the product $(W_1 \times W_2)$ so that

$$W_1 \times (W_2 \times W_3) = (W_1 \times W_2) \times W_3 . \qquad (5)$$

If $W(t,\tau) \in F_1^2$ the following equation is valid for all whole numbers $m, n \geq 1$

$$W^{\times m} \times W^{\times n} = W^{\times (m+n)} . \qquad (7)$$

14) Let $f \in D_1$; k, r be whole numbers; then $(f^{(k)})^{(r)} = f^{(k+r)}$;

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The use of operators...

where $f^{(o)}$ is the distribution f. The above axioms are followed by numerical samples, and application to series and parallel connections. The author notes finally that the theory stated in this article is not the only one suitable for analyzing dynamic systems with variable elements, and that a different approach to the problem based on transformation methods is to be found in L. A. Zadeh: (Refs. 7 and 8: Time dependent Heaviside Operators. Journal of Math. and Physics, Vol. XXX, 1951, and A General Theory of Linear Signal Transmission Systems, Journal of the Franklin Institute Vol. 253, 1952). There are 3 figures and 8 references: 6 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: L. A. Zadeh, Time dependent Heaviside Operators. Journal of Math. and Physics. Vol. XXX, 1951, L. A. Zadeh, A General Theory of Linear Signal Transmission Systems, Journal of the Franklin Institute, Vol. 253, 1952.

ASSOCIATION: Matematický ústav CSAV (Mathematical Institute of the Czechoslovak AS)

SUBMITTED: December 9, 1959

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AUTHOR: Doležal, Václav

TITLE: Fourier transformations in the theory of linear systems

PERIODICAL: Aplikace matematiky, v. 6, no. 3, 1961, 184 - 213

TEXT: The article deals with solving linear, dynamic physical systems by Fourier transformations. The usual application of Fourier transformation is assumed as known, also the usual limitations (the need for convergence of the Fourier integral). It is intended to show that by a generalization of Fourier transformations, the limitation of the classical method can be removed. A system Z' is formed which is isomorphous with the distribution system K'. The Fourier transformation is defined, its basic properties are derived e.g. the rules on the derivation of the original and the displacement of the original. It is then shown that these rules are formally equivalent to the classic Fourier transformation rules.

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